DOCUMENT RESUME

ED 225 278 EA 015 312

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TITLE The School Improvement Model: A Scenario for Operational Status, 1983-1984.
INSTITUTION Iowa State Univ. of Science and Technology, Ames. Dept. of Education.
SPONS AGENCY Iowa State Univ. of Science and Technology, Ames. Research Inst. for Studies in Education.; Northwest Area Foundation, St. Paul, Minn.
REPORT NO SIM-OP-82-6
PUB DATE Jun 82
NOTE 10p.; A School Improvement Model project publication; For related documents, see EA 015 309-314.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Academic Achievement; Administrator Evaluation; Cost Effectiveness; Elementary Secondary Education; *Improvement Programs; Program Costs; Staff Development; Teacher Evaluation; *Teacher Improvement
IDENTIFIERS *School Improvement Model

ABSTRACT

The School Improvement Model project, a total systems approach to evaluating and improving instruction, will be fully implemented by 1983-84. The project includes four components: teacher performance evaluation, administrator performance evaluation, student achievement measurement, and staff development. Five school districts in Minnesota and Iowa are participating. The years 1981-82 and 1982-83 were designated for development of teacher and administrator performance appraisal systems and student criterion-referenced and norm-referenced tests. Staff development programs centering on improved instruction and learning have been selected by each school district independently. These activities include essentials of effective teaching, teacher expectations for student achievement, classroom management, time-on-task, and cooperative learning. Finally, the costs of teaching reading and mathematics in target grades were analyzed, as were the costs of the project's evaluation and staff development activities. The year 1982-83 has also been designated for teacher and administrator training, both for improved teaching and for project implementation. In September 1983 pretesting of students will begin and demographic data and data on school characteristics and climate will be obtained. Then teacher and administrator evaluation will be accomplished. Finally, all data will be used to correlate student achievement with changes in instructional performance stemming from the intervention. (Author/JM)

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Occasional Paper 82-6

THE SCHOOL IMPROVEMENT MODEL: A SCENARIO FOR OPERATIONAL STATUS, 1983-1984

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Published by

The School Improvement Model Project
College of Education
E005 Quadrangle
Iowa State University
Ames, Iowa 50011

June 1982

Publication of this work is supported by the Northwest Area Foundation, a consortium of five K-12 school organizations, and the Research Institute for Studies in Education at Iowa State University.

EA 015 312

Abstract

The School Improvement Model (SIM) project is approaching full implementation status. During the school year 1983-1984, all four links will be in place, viz., teacher performance evaluation, administrator performance evaluation, student achievement measurement and interventions in the form of staff development. This occasional paper is intended to give the educator who is not familiar with the previous years of planning and development, 1979 - 1983, an understanding of this total-systems approach to evaluating and improving teaching and learning.

THE SCHOOL IMPROVEMENT MODEL:
A SCENARIO FOR OPERATIONAL STATUS, 1983-1984

The School Improvement Model is a total-systems approach to evaluating and improving K-12 instruction. Four linkages are made: teacher performance, administrator performance, student achievement, and interventions in the form of staff development. Utilizing five markedly different school organizations, control variables have been carefully established to account for costs (instructional, administrative, and interventions) class size, turnover, previous academic success, socio-economic status, etc. The model, to be fully operational in 1983-84, will be tested using fourth and eighth grade mathematics and fourth grade reading as the target subjects. This paper is an account of the development of the model and how the system will work.

The model was first conceived with the assistance of a planning grant from the Northwest Area Foundation in 1979-80. Three school years will have been spent in development and implementation activities, 1980-81, 1981-82, and 1982-83. Creation of the model served a number of mutual benefit purposes. First the Foundation wished to influence public and independent school policy and decision-making by encouraging the use of a total-systems approach to evaluation. The school organizations, while interested in the theoretical and policy aspects, were vitally concerned with improving instruction in the basic subjects and providing their teachers and administrators with practical, up-to-date staff development programs. Finally, the Iowa State University researchers were eager to field-test, on a larger basis, a number of teacher and administrator performance improvement strategies that had been formulated in the Iowa

State University Research Institute and elsewhere. Subsequent funding for a four-year test by the Foundation made the venture possible.

The five school organizations, because of size, composition of enrollment, locale, and philosophy were selected to represent, to a limited degree, the diversity of school districts and independent schools in the United States. The school organizations are Edina Public Schools, Northfield Public Schools, Minneapolis Public Schools, and Breck School (Independent) all in Minnesota and Spirit Lake Community Schools in Iowa. Minneapolis, with it's vastly larger enrollment, offers an opportunity to use control schools which will not receive interventions; in the remainder, all teachers will receive the intervention(s). Thus, all target classes will be studied for achievement gains over time. Each school organization has selected, planned, and delivered its own choice of intervention experiences with the assistance of the Iowa State University research team. The Research Institute for Studies in Education (RISE) at Iowa State directs the SIM project and administers the research grant.

During the school years 1981-82 and 1982-83, the performance appraisal systems planned by each school organization in 1980-81 have been developed and put into place. Teacher performance evaluation, utilizing criteria drawn from the research base on effective teaching, is rigorous and thorough. All appraisers have had training which increased their skills in preobservation lesson analysis, classroom observation, and post-observation feedback. Interrater reliability was carefully measured and improved. Administrator evaluation instruments and procedures have been created and tested for all administrative positions. Special attention was given to the evaluation of principals' performance. Both performance evaluation systems were modified and improved after careful field testing.

Senior administrators and board members have been trained to conduct their evaluation responsibilities and chief executive officers have been given continuous Management Information Systems (MIS) reports.

The measurement of student achievement is of signal importance to the success of the model. Criterion-referenced tests (CRTs) appropriate to the target grades and subjects were created with the assistance of testing specialists from RISE. In some instances, the school organizations already had an objectives-based curriculum and had such tests in use. These were updated and continued. In other school organizations CRTs were cooperatively developed by teachers, administrators, and the SIM research team. Each school organization selected its own Norm-referenced tests (NRTs) to be administered. The Iowa Tests, the California Achievement Tests, and the Stanford Achievement Tests were selected. The decision was made early in the project not to compare results across school organizations, but rather to make all comparisons with repeated measures over time within each school organization. It was reasoned that this would be the way future adopting districts and independent schools would use the SIM materials and techniques. Pre- and post-testing with both CRTs and NRTs has been conducted in the fall and spring of 1981-82 and 1982-83. All testing was conducted with SIM team monitors on site.

Interventions (staff development programs centering on improved instruction and learning) were selected by each school organization independently. The SIM researchers created the umbrella model, conducted seminars to display alternatives, and offered advice. Although the impact of the interventions will be measured primarily by student gain

scores in the fourth and eighth grade target subjects, it was decided to include some teachers and administrators from all grades and school units for cost-effective training. This was not the case in Minneapolis, where only one-third of the school units were involved so as to maintain the integrity of control groups. Because pre- and post-testing with both NRTs and CRTs is an integral part of the SIM model, two control groups are deemed necessary. One-third of the Minneapolis school units will receive pre- and posttesting (same as the experimental group but will will receive no intervention training) and the final third will have no contact with the SIM project until a one-time posttest with both NRTs and CRTs is administered in May of 1984.

Selection of the proper interventions has been one of the most perplexing aspects of the entire five-year consortium. All of the senior administrators of the school organizations and all of the principal investigators from Iowa State University had experienced the excesses of hope, the over-promising of the disappointing "movements" of the sixties and seventies. Thus, the executive committee charged with selecting and planning the interventions was extremely wary and conservative in choices and expectations. The field coordinators (who were also the persons charged with staff development responsibilities for their organizations) were torn between the desire to obtain quick gains in reading and mathematics and the equally important goal of creating a staff development strategy that would provide a long-term payoff for all of their teachers and students. While this dilemna made choosing and planning more difficult, it certainly approximated the quandry of all school staff development specialists in the 80's! At the present writing the choices include: essentials of effective teaching, teacher expectations for student achievement (TESA), classroom management/

time-on-task, cooperative learning, and suggestive accelerative learning and teaching (SALT).

The final component of the SIM system is cost analysis. Ultimately, the intent is for cost-benefit analysis to be possible. Two related and simultaneous cost studies have been conducted. First, the cost of teaching reading and mathematics in the target grades has been computed. This was a major undertaking and required a great deal of original methodology. Second, the costs of supervision and staff development were determined. These costs were defined in such a way as to include all of the school organization costs of conducting the teacher and administrator evaluation systems as designed by the SIM consortium and the organizational and SIM costs of all staff development activities affecting teachers of the target subjects during the SIM experiment.

The Payoff Year

The final year of the project has been preceded by an intensive year of staff development for both teachers and principals (1982-83). In addition to training to improve teaching, all parties have been prepared to use the CRT and NRT data to enhance instruction. Both teachers and principals have been pre- and posttested in regards to interventions. The results of administrator and teacher performance evaluation reports have been used to identify last-minute needs for additional teacher training. Some such "fine tuning" may be necessary for all participants in year four.

Early in September of the final year, the total-system data collection begins. In four of the school organizations fourth grade students are pretested in reading and mathematics and eighth grade students are pretested in mathematics. In the Minneapolis Public Schools two-thirds of the

students in target classes will be pretested. At that time demographic data concerning both teachers and students are gathered. Certain school unit data will be collected centering on climate, constraints and ethos of each attendance center. Costs of instruction, supervision, and evaluation activities will be computed. Five variables involving school unit/building will also be examined:

1. Style of leadership (instructional leader or manager)

2. Climate -- level of physical facilities
   adequacy of assignment of space
   criteria for choice of materials
   criteria for distribution of resources in school

3. Extent to which adults have common understanding of purposes of school -- sample all adult personnel -- what do they care most about -- together or not together?

4. Measure of level of expected mastery conveyed by teacher behavior -- Is the teacher conveying the idea of universal mastery? If 2/3 of students master and 1/3 does not, what is that teacher going to do?

5. What use does school make of its portrayal of pupil performance? What role does achievement or lack of achievement play on program evaluation? Is it modified when achievement is low or do they just continue on as is?

Special attention will be given to how teachers perform. Time allotted to target subjects will be examined. The new teacher evaluation formative and summative reports will be produced. Accomplishment of job improvement targets set in year three will be carefully monitored. Principals will be surveyed as to the extent of use of the interventions applied, and teachers will be queried by a self-report detaling their teaching practices employed during the final year.

Principals and the Breck School Division Heads will be evaluated by their immediate superiors using the revised administrator appraisal instruments which have been custom-tailored to emphasize the effective

instructional leader behaviors. Again, accomplishment of the job improvement targets of the previous year will be measured. Central office administration and the performance of chief executive officers will be evaluated. Goals and objectives of each organization and school unit will be studied for suggestions for the final MIS report plans.

The close of year four will be a particularly busy time. Post-testing of all students in target subjects (including the last third of the Minneapolis group) will be accomplished. All student, teacher, administrator, building, school organization, and cost data must be assembled and placed in machine-usable form for the test of the analysis model. Simply described, all data collected will be used to associate instructional performance (and changes because of intervention) to how much students have achieved. Cost, teacher, school unit, and student demographic data will be used to subcategorize as control variables (disaggregate). All data capture, assembly, and analysis will be carefully programmed and recorded so that other school organizations may follow those practices which prove effective for evaluating and improving school performance.

Presently, it is the policy of the SIM Consortium and the Foundation that all procedures created for an individual school organization become the intellectual property of that organization. The total developmental steps and the analysis created by the SIM staff are in the public domain.